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EXAMINER
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3623	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 February 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,15-30 and 32-47* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *34-39* is/are allowed.

6)☒ Claim(s) *1-5,7-13,15,16,19-23,25-30,32,33,40-43 and 45-47* is/are rejected.

7)☒ Claim(s) *6,17,18,24 and 44* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 02/26/2007 has been entered.

2.   Claims 1, 11, and 19 have been amended. Claims 34-47 have been added. Claims 1-13,

15-30, and 32-47 are pending.

Response to Arguments

3.   Applicant's arguments with regards to Powell (U.S. 6,195,590) in view of Chapman

(U.S. 5,128,860) have been fully considered, but they are not persuasive. In the remarks,

Applicant argues that Powell and Chapman do not teach or suggest (1) comparing the scheduled

completion date with the requested completion date for orders, (2) comparing item orders or line

item order, where each customer line item is an individual customer requested product for

purchase, (3) determining a customer service measurement for a first and a second customer

based on the customer service measurement for each item order from a first and a second

customer as per claims 11 and 29, and that Powell does not teach or suggest (3) the consideration

of value (or cost) in the measurement or that the customer service measurement includes a

derivation of value of the customer line item that is late multiplied by the amount of the time

difference between the requested completed date and the scheduled completion date as per

claims 4, 5, 22, and 23, and (4) there is no suggestion in the references or prior art to combine

Chapman and Powell.

In response to argument (1), Examiner respectfully disagrees. Powell discloses

comparing the scheduled completion date with the requested completion date for each selected

item orders. See column 1, lines 62-67, column 2, lines 17-35 and line 65-column 3, line 20 and

lines 60-67, wherein each order has a scheduled completion date and wherein the order is

selected to determine the delta value, or the value representing whether the order is early or late

with regards to the schedule. Chapman was specifically relied upon to teach different aspects

and information that would be included in a comparison, these aspects and information arranged

in arrays, as asserted below. Chapman specifically teaches comparing the scheduled completion

date of an item in the supply array with the requested completion date for the matched item in the

demand array in column 4, lines 60-67, column 8, lines 45-61, column 9, lines 19-32 and 45-50,

and column 10, line 5-25. Looking specifically at column 9, lines 19-32 and 45-50, and column

10, lines 5-25, Chapman discloses that the desired schedule (i.e. the desired demand quantity and

completion date (and/or starting date)) and the resource schedule (i.e. the availability to supply

the demand based on capacity and resources) are compared to see if resources can accommodate

demand. New schedules are proposed based on the demand and supply, and when no complete

solution can be found (ie some or all of the demand cannot be met by the current supply), an

error or alternative suggestion is generated.

In response to arguments (2) and (3), Examiner points out that this is a new limitation

that has been added in the current amendments and it is therefore addressed below by the new art

rejections, necessitated by amendment.

In response to argument (4), Examiner respectfully disagrees. Claims 4 and 22 recites "deriving a customer service measurement for each item order based on said comparing, the customer service measurement comprising the value of the item order", which does not include a value of the customer line item that is late multiplied by the amount of the time difference between the requested completed date and the scheduled completion date. Therefore, Powell teaches the claimed limitation of claims 4 and 22. See column 2, lines 17-35 and line 65-column 3, line 20 and lines 60-67, and column 6, lines 29-31, wherein a measurement of earliness or lateness is derived based on time. See column 6, lines 30-40 and line 55-column 7, line 15 and 25-45, wherein the value (or cost) is also considered with respect to the measurement. Examiner notes that the arguments with respect to claims 5 and 23 are moot based on the new grounds of rejection below.

In response to argument (5) that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, · suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both Chapman and Powell disclose systems for improving scheduling in manufacturing systems where demands have time varying elements. Powell discloses scheduling an order and, using data stored in the system, comparing a completion and a requested completion date. Chapman discloses arranging the data of the system into arrays and then manipulating this data to schedule demand fulfillment in a manufacturing process. Chapman

specifically discloses the more efficient and timely evaluation of data through the use of the
stored data structures of matrices and arrays in at least column 2, lines 45-65 and column 5, lines
29-40. Therefore, since both systems are concerned with improving scheduling, one of ordinary
skill in the art at the time of the invention would have been motivated to use the arrays of
Chapman to store and manipulate the data of Powell based on the specific disclosure of
Chapman discussing operating effectiveness.

Allowable Subject Matter

4.   Claims 34-39 are allowed.

5.   Claim 6, 17, 18, 24, and 44 are objected to as being dependent upon a rejected base
claim, but would be allowable if rewritten in independent form including all of the limitations of
the base claim and any intervening claims. Further, if the elements of claim 17 were added to
claim 19, claim 19 would be considered allowable. Examiner reserves the right to update her
search.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

7.   Claims 40-41, 43, and 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable
over Powell (U.S. 6,195,590).

As per claim 40, Powell teaches a computer-implemented method for determining

customer service impact, comprising:

Receiving item orders, each having a requested completion date (See column 1, lines 62-

67, column 2, lines 17-30, column 3, lines 1-3 and 60-67, wherein items ordered have dates

established as required completion dates);

scheduling a scheduled completion date for each item order (See column 1, lines 62-67,

column 2, lines 17-30, column 3, lines 1-3 and 60-67, wherein a completion date is scheduled for

each order/event);

selecting at least one item order, each item order having a scheduled completion date

(See column 1, lines 62-67, column 2, lines 17-35 and line 65-column 3, line 20 and lines 60-67,

wherein each order has a scheduled completion date and wherein the order is selected to

determine the delta value, or the value representing whether the order is early or late with regards

to the schedule);

comparing the scheduled completion date with the requested completion date for each

selected item orders (See column 1, lines 62-67, column 2, lines 17-35 and line 65-column 3, line

20 and lines 60-67, wherein each order has a scheduled completion date and wherein the order is

selected to determine the delta value, or the value representing whether the order is early or late

with regards to the schedule);

deriving a customer service measurement for each selected item order based on said

comparing, the customer service measurement comprising a measurement of at least one of time

and money (See column 2, lines 17-35 and line 65-column 3, line 20 and lines 60-67, and

column 6, lines 29-31, wherein a measurement of earliness or lateness is derived based on time).

However, Powell does not expressly disclose that the received orders are line item orders

for an individual customer requested product for purchase.

Powell discloses scheduling an order for manufacturing. It is old and well known in the

art that orders that are manufactured based on requests from individual customers who require

such items. Therefore, it would have been obvious to one of ordinary skill in the art at the time

of the invention to include that the orders are received from individual customers in order to

more efficiently allocate resources to meet the demand of the customers in the market.

As per claim 41, Powell discloses wherein customer service measurement includes the

amount of time difference between the requested completion date and a scheduled completion

date multiplied by the value of the line item order (See column 2, lines 17-35 and line 65-column

3, line 20 and lines 60-67, and column 6, lines 29-31, wherein a measurement of earliness or

lateness is derived based on time. See column 6, lines 30-40 and line 55-column 7, line 15 and

25-45, wherein the value (or cost) is amplified with respect to the measurement).

As per claim 43, Powell teaches a computer-implemented method for determining

customer service impact, comprising:

receiving customer line item orders, each having a requested completion date, wherein

each customer line item is an individual customer requested product for purchase (See column 1,

lines 62-67, column 2, lines 17-30, column 3, lines 1-3 and 60-67, wherein items ordered have

dates established as required completion dates);

scheduling a scheduled completion date for each line item order (See column 1, lines 62-

67, column 2, lines 17-30, column 3, lines 1-3 and 60-67, wherein a completion date is scheduled

for each order/event);

selecting at least one line item order (See column 1, lines 62-67, column 2, lines 17-35 and line 65-column 3, line 20 and lines 60-67, wherein each order has a scheduled completion date and wherein the order is selected to determine the delta value, or the value representing whether the order is early or late with regards to the schedule);

comparing the scheduled completion date with the requested completion date for each selected line item order (See column 1, lines 62-67, column 2, lines 17-35 and line 65-column 3, line 20 and lines 60-67, wherein each order has a scheduled completion date and wherein the order is selected to determine the delta value, or the value representing whether the order is early or late with regards to the schedule);

deriving a customer service measurement for each selected line item order based on said comparing (See column 2, lines 17-35 and line 65-column 3, line 20 and lines 60-67, and column 6, lines 29-31, wherein a measurement of earliness or lateness is derived based on time);

identifying a subset of line item orders having a customer service measurement that indicates delay (See column 5, lines 18-21, wherein a user would use cited "identifying" function for above discussed delta value or customer service indicator or measurement which is subject to a delay. See column 6, lines 32-42); and

performing at least one material limitation inquiry on the subset of line item orders to identify a cause of the customer service measurement indicating delay (See column, lines 13-15, wherein "beginning of an activity constrained by completion of another activity" indicating applying or performing "constraint").

However, Powell does not expressly disclose that the delay is what caused the customer service measurement to be greater than a predetermined threshold.

Powell discloses a system that monitors operations and determines delays. Powell further discloses a customer service measurement based on a measurement of earliness or lateness. It is old and well known in scheduling arts to set a threshold above which events, such as delays, are unacceptable and a manager is notified. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include thresholds that indicate lateness in order to more efficiently notify a manger of a delay.

As per claims 45-46, Powell teaches performing material limitation inquires (as per claim 43). Therefore, with regards to claims 45-46, these claims do not occur when the "at least one of" material inquiry is performed.

As per claim 47, Powell discloses identifying a subset of line item orders having a customer service measurement that indicates delay (See column 5, lines 18-21, wherein a user would use cited "identifying" function for above discussed delta value or customer service indicator or measurement which is subject to a delay. See column 6, lines 32-42); and

performing at least one of material limitation inquiry on the subset of line item orders to identify a cause of the customer service measurement indicating delay, wherein a resource is responsible for the delay (See column, lines 13-15, wherein "beginning of an activity constrained by completion of another activity" indicating applying or performing "constraint").

However, Powell does not expressly disclose that the delay is what caused the customer service measurement to be greater than a predetermined threshold.

Powell discloses a system that monitors operations and determines delays. Powell further discloses a customer service measurement based on a measurement of earliness or lateness. It is old and well known in scheduling arts to set a threshold above which events, such as delays, are

unacceptable and a manager is notified. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to include thresholds that indicate lateness in

order to more efficiently notify a manger of a delay.

5.   Claims 1-4, 7-13, 15-16, 18-22, 25-30, and 32-33 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Powell (U.S. 6,195,590) in view of Chapman (U.S. 5,128,860).

As per claim 1, Powell teaches a computer-implemented method for determining

customer service impact, comprising:

Receiving customer line item orders, each having a requested completion date, wherein

each customer line item is an individual customer requested product for purchase (See column 1,

lines 62-67, column 2, lines 17-30, column 3, lines 1-3 and 60-67, wherein items ordered have

dates established as required completion dates);

scheduling a scheduled completion date for each item order (See column 1, lines 62-67,

column 2, lines 17-30, column 3, lines 1-3 and 60-67, wherein a completion date is scheduled for

each order/event);

selecting at least one item order, each item order having a scheduled completion date

(See column 1, lines 62-67, column 2, lines 17-35 and line 65-column 3, line 20 and lines 60-67,

wherein each order has a scheduled completion date and wherein the order is selected to

determine the delta value, or the value representing whether the order is early or late with regards

to the schedule);

comparing the scheduled completion date with the requested completion date for each

selected item orders (See column 1, lines 62-67, column 2, lines 17-35 and line 65-column 3, line

20 and lines 60-67, wherein each order has a scheduled completion date and wherein the order is

selected to determine the delta value, or the value representing whether the order is early or late

with regards to the schedule);

deriving a customer service measurement for each selected item order based on said

comparing, the customer service measurement comprising a measurement of at least one of time

and money (See column 2, lines 17-35 and line 65-column 3, line 20 and lines 60-67, and

column 6, lines 29-31, wherein a measurement of earliness or lateness is derived based on time).

However, Powell does not expressly disclose that the received orders are line item orders

for an individual customer requested product for purchase. Further, Powell does not expressly

disclose and Chapman discloses wherein said comparing comprises:

generating a demand array of item orders (See column 3, lines 50-65, column 4, lines 35-

60, and column 9, lines 45-50, wherein a demand array is created that conveys demanded items);

generating a supply array of manufacturing inventory (See column 3, lines 59-67, column

8, line 60-column 9, line 30, which discloses an array of the supply/resources available);

selecting an item order in the demand array (See column 4, lines 1-13 and 60-65, column

9, lines 45-55, column 10, lines 5-22, wherein an item is selected to which resources are

assigned);

matching manufacturing inventory in the supply array with the selected item order (See

column 4, lines 1-13 and 60-65, column 9, lines 45-55, column 10, lines 5-22, wherein an item is

selected to which resources are assigned); and

comparing the scheduled completion date of an item in the supply array with the

requested completion date for the matched item in the demand array (See column 4, lines 60-67,

column 8, lines 45-61, column 9, lines 19-32 and 45-50, and column 10, line 5-25, wherein the

schedules are compared).

However, Chapman does not expressly disclose that the received orders are line item

orders for an individual customer requested product for purchase.

Both Chapman and Powell disclose systems for improving scheduling in manufacturing

systems where demands have time varying elements. Powell discloses scheduling an order and,

using data stored in the system, comparing a completion and a requested completion date.

Chapman discloses arranging the data of the system into arrays and then manipulating this data

to schedule demand fulfillment in a manufacturing process. It would have been obvious to one

of ordinary skill in the art at the time of the invention to use arrays to store and manipulate the

data of Powell in order to more efficiently allocate and schedule resources by arranging the data

using means that allow quicker evaluation of the data. See Chapman, column 2, lines 45-65 and

column 5, lines 29-40.

Further, as discussed above, Powell discloses scheduling an order. It is old and well

known in the art that orders that are manufactured based on requests from individual customers

who require such items. Therefore, it would have been obvious to one of ordinary skill in the art

at the time of the invention to include that the orders are received from individual customers in

order to more efficiently allocate resources to meet the demand of the customers in the market.

As per claim 2, Powell discloses wherein said deriving comprises:

deriving a customer service measurement for each item order based on said comparing,

the customer service measurement comprising the time difference between the requested

completion date and a scheduled completion date (See column 2, lines 17-35 and line 65-column

3, line 20 and lines 60-67, wherein the delta value is the actual date minus the required or

requested date (i.e. the difference of the dates)).

As per claim 3, Powell wherein the time difference is measured in one or more of years,

weeks, days, hours, minutes, and seconds (See column 2, lines 17-35 and line 65-column 3, line

20 and lines 60-67, wherein the difference is measured in days).

As per claim 4, Powell discloses wherein said deriving comprises:

deriving a customer service measurement for each item order based on said comparing,

the customer service measurement comprising the value of the item order (See column 2, lines

17-35 and line 65-column 3, line 20 and lines 60-67, and column 6, lines 29-31, wherein a

measurement of earliness or lateness is derived based on time. See column 6, lines 30-40 and

line 55-column 7, line 15 and 25-45, wherein the value (or cost) is also considered with respect

to the measurement).

As per claim 7, Powell teaches determining an overall customer service measurement

based on the customer service measurement for each item order (See column 2, lines 17-35 and

line 65-column 3, line 20 and lines 60-67, and column 6, lines 29-31).

As per claim 8, Powell teaches reporting the overall customer service measurement as the

overall customer service measurement for that scheduling operation (See column 5, lines 45-67,

column 6, lines 40-55, column 7, lines 15-30, wherein reports are generated).

As per claim 9, Powell discloses displaying the customer service measurement on a

calendar showing the total customer service measurement for a predetermined time period (See

column 2, lines 55-column 3, line 10 and lines 60-67, and column 4, lines 1-15, wherein the

customer service measurement is shown and considered when scheduling other orders and activities. See also tables 1-2).

As per claim 10, Powell discloses repeating said receiving, scheduling, selecting, comparing, deriving, and determining for different schedules to determine the customer service impact of schedule changes (See column 2, lines 1-6, column 4, lines 20-32, column 5, lines 30-42, wherein changes to the schedule are evaluated).

As per claim 11, Powell discloses determining a customer service measurement for based on the customer service measurement for each item order received (See column 2, lines 17-35 and line 65-column 3, line 20 and lines 60-67, and column 6, lines 29-31, wherein a measurement of earliness or lateness of a product is derived based on time).

However, neither Powell nor Chapman expressly disclose a first and a second customer.

Powell discloses receiving and scheduling an order for manufacture. It is old and well known in the art that orders that are manufactured based on requests from individual customers who require such items. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include that the orders are received from individual customers in order to more efficiently allocate resources to meet the demand of the customers in the market.

As per claim 12, Powell teaches displaying the customer service measurement on a calendar showing the total customer service measurement for a predetermined time period (See column 2, lines 55-column 3, line 10 and lines 60-67, and column 4, lines 1-15, wherein the customer service measurement is shown and considered when scheduling other orders and activities. See also tables 1-2).

As per claim 13, Powell further comprising repeating said receiving, scheduling, selecting, comparing and determining for different schedules to determine the customer service impact of schedule changes (See column 2, lines 1-6, column 4, lines 20-32, column 5, lines 30-42, wherein changes to the schedule are evaluated).

As per claim 15, Powell discloses line items, wherein data concerning the line item is controlled by the system (See column 4, line 62-column 5, line 12, and table 1). Powell further discloses all the activities for all the components needed to complete the product (i.e. engineering, purchasing, fabrication, assembly) (See column 3, lines 54-57). However, Powell does not expressly disclose generating a demand array or that the line items are unshipped.

Chapman discloses generating a demand array of item orders (See column 3, lines 50-65, column 4, lines 35-60, and column 9, lines 45-50, wherein a demand array is created that conveys demanded items).

Both Chapman and Powell disclose systems for improving scheduling in manufacturing systems where demands have time varying elements. Powell discloses scheduling an order and, using data stored in the system, comparing a completion and a requested completion date. Chapman discloses arranging the data of the system into arrays and then manipulating this data to schedule demand fulfillment in a manufacturing process. It would have been obvious to one of ordinary skill in the art at the time of the invention to use arrays to store and manipulate the data of Powell, such as demand data, in order to more efficiently allocate and schedule resources by arranging the data using means that allow quicker evaluation of the data. See Chapman, column 2, lines 45-65 and column 5, lines 29-40.

Further, Powell discloses all the activities needed to complete the product, such as engineering, purchasing, fabrication, assembly. It is well known in the art that completing a product for a customer includes delivery of said product. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include shipping in the activities needed to complete the product in order to increase customer service by including all the activities required to complete the order of the customer.

As per claim 16, Powell does not expressly disclose and Chapman discloses wherein said generating a supply array comprises generating a supply array of at least one of inventory work orders and manufactured inventory (See column 3, lines 59-67, column 8, line 60-column 9, line 30, which discloses an array of the supply/resources available and assignable to work).

As per claim 19, Powell teaches a system for determining customer service impact, comprising:

a receiver for receiving item orders, each having a requested completion date (See column 1, lines 62-67, column 2, lines 17-30, column 3, lines 1-3 and 60-67, wherein items ordered have dates established as required completion dates);

a scheduler for scheduling a scheduled completion date for each item order (See column 1, lines 62-67, column 2, lines 17-30, column 3, lines 1-3 and 60-67, wherein a completion date is scheduled for each order/event);

a selector for selecting at least one item order, each item order having a scheduled completion date (See column 1, lines 62-67, column 2, lines 17-35 and line 65-column 3, line 20 and lines 60-67, wherein each order has a scheduled completion date and wherein the order is

selected to determine the delta value, or the value representing whether the order is early or late

with regards to the schedule);

a comparator for comparing the scheduled completion date with the requested completion

date for the selected item orders (See column 1, lines 62-67, column 2, lines 17-35 and line 65-

column 3, line 20 and lines 60-67, wherein each order has a scheduled completion date and

wherein the order is selected to determine the delta value, or the value representing whether the

order is early or late with regards to the schedule);

a measurement subsystem for deriving a customer service measurement, the customer

service measurement comprising at least one of time and money, for each selected item order

based on the comparison (See column 2, lines 17-35 and line 65-column 3, line 20 and lines 60-

67, and column 6, lines 29-31, wherein a measurement of earliness or lateness is derived based

on time).

However, Powell does not expressly disclose that the received orders are line item orders

for an individual customer requested product for purchase. Further, Powell does not expressly

disclose and Chapman discloses wherein said comparing comprises:

a first generator for generating a demand array of item orders (See column 3, lines 50-65,

column 4, lines 35-60, and column 9, lines 45-50, wherein a demand array is created that

conveys demanded items);

a second generator generating a supply array of manufacturing inventory (See column 3,

lines 59-67, column 8, line 60-column 9, line 30, which discloses an array of the

supply/resources available);

a selector for selecting an item order in the demand array (See column 4, lines1-13 and 60-65, column 9, lines 45-55, column 10, lines 5-22, wherein an item is selected to which resources are assigned);

a matching subsystem for matching manufacturing inventory in the supply array with the selected item order (See column 4, lines1-13 and 60-65, column 9, lines 45-55, column 10, lines 5-22, wherein an item is selected to which resources are assigned); and

a comparator for comparing the scheduled completion date of an item in the supply array with the requested completion date for the matched item in the demand array (See column 4, lines60-67, column 8, lines 45-61, column 9, lines 19-32 and 45-50, and column 10, line 5-25, wherein the schedules are compared).

However, Chapman does not expressly disclose that the received orders are line item orders for an individual customer requested product for purchase.

Both Chapman and Powell disclose systems for improving scheduling in manufacturing systems where demands have time varying elements. Powell discloses scheduling an order and, using data stored in the system, comparing a completion and a requested completion date. Chapman discloses arranging the data of the system into arrays and then manipulating this data to schedule demand fulfillment in a manufacturing process. It would have been obvious to one of ordinary skill in the art at the time of the invention to use arrays to store and manipulate the data of Powell in order to more efficiently allocate and schedule resources by arranging the data using means that allow quicker evaluation of the data. See Chapman, column 2, lines 45-65 and column 5, lines 29-40.

Further, as discussed above, Powell discloses scheduling an order. It is old and well known in the art that orders that are manufactured based on requests from individual customers who require such items. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include that the orders are received from individual customers in order to more efficiently allocate resources to meet the demand of the customers in the market.

Claims 20-23, 25-27, 30, and 32-33 recite equivalent limitations to claims 2-5, 7-9, 12, and 15-16, respectively, and are therefore rejected using the same are and rationale as set forth above.

As per claim 28, Powell discloses a display for displaying the customer service measurement of different schedules to determine the customer service impact of schedule changes (See column 2, lines 1-6, column 4, lines 20-32, column 5, lines 30-42, column 8, lines 15-25, wherein changes to the schedule are evaluated and displayed).

As per claim 29, Powell teaches a display for displaying a customer service measurement based on the customer service measurement for each item order (See column 2, lines 55-column 3, line 10 and lines 60-67, and column 4, lines 1-15, wherein the customer service measurement is displayed. See also tables 1-2).

However, neither Powell nor Chapman expressly disclose a first customer.

Powell discloses receiving and scheduling an order for manufacture. It is old and well known in the art that orders that are manufactured based on requests from individual customers who require such items. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include that the orders are received from individual customers in order to more efficiently allocate resources to meet the demand of the customers in the market.

8.   Claims 5, 23, and 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Powell (U.S. 6,195,590) in view of Kleinfeld (*Engineering Economic*).

As per claims 5, 23, and 42, Powell discloses deriving a customer service measurement

for each item order comprising the time difference between the requested completion date and a

scheduled completion date (See column 2, lines 17-35 and line 65-column 3, line 20 and lines

60-67, wherein the delta value is the actual date minus the required or requested date (i.e. the

difference of the dates)). However, Powell does not expressly disclose that the customer service

measurement includes the amount of time difference between the requested completion date and

a scheduled completion date multiplied by the value of the line item order and multiplied by a

predetermined interest rate.

Kleinfeld discloses the calculation of a value based on the time differences multiplied by

the value of the line item order and multiplied by a predetermined interest rate (See pages 34,

section 1, page 35, and page 36, wherein a financial values is multiplied by an interest or

discount rate based on the interval of time).

Powell discloses a system for improving scheduling in manufacturing systems where

demands have time varying elements. Powell discloses scheduling an order and, using data

stored in the system, comparing a completion and a requested completion date. Kleinfeld

discloses valuation using interest rates and timeframes. It would have been obvious to one of

ordinary skill in the art at the time of the invention to use this valuation technique in the system

Powell in order to more efficient valuing and guidance with respect to decision making and

management. See Kleinfeld, pages 33-4.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beth Van Doren whose telephone number is 571-272-6737. The examiner can normally be reached on M-F, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

bvd
April 11, 2007

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